

Amendments to the specification:

Please replace the paragraph bridging pages 2-3 with the following replacement paragraph:

The E2F family (E2F1-E2F5) are capable of activating transcription when bound to DNA. For example, E2F-1 is a ubiquitously expressed growth regulated, gene exhibiting peak transcriptional activity in S-phase [Tevosian, S.G., et al., Cell Growth and Diff. 7:43-52 (1996), Kaelin, W.G. et al., Cell 70:351-364 (1992)] Transcription of the gene is cell cycle dependent as a result of E2F DNA-binding sites within its promoter [Neuman, E., et al., Mol. Cell Biol. 14:6607-6615 (1994)]. E2F activity is regulated, in part, by complex formation with cell cycle regulatory proteins such as cyclin A, cyclin K, cdk2, and members at the retinoblastoma protein (pRB) family (pRB, p107 and p130) [Weinberg, R.A., Cell 81:323-330 (1995); Adams P.D. and Kaelin, W.G., Seminars in Cancer Biology 6:99-108 (1995)] Members of the pRB family actively repress transcription when bound to DNA via E2F [Sellers, W.R., et al. Pro. Natl. Acad. Sci. USA 92:11544-11548 (1995); Weintraub, S.J. et al. Nature 358:259-261 (1992)]. Overproduction of E2F can override a pRB-induced growth arrest [Qin X.-Q, Mol. Biol. Cell 15:742-755 (1995); Zhu L., et al. Genes Dev. 7:1111-1125 (1993)] Many malignant cells for example ~~example~~ solid tumors such as malignant gliomas, have disrupted pRB function; either due to RB-1 gene mutations or due to mutations affecting upstream regulators of pRB such as cyclin D1 or p16/INK 4aIMTSI [Weinberg RA, Cell, supra, He J. et al. Cancer Research 54:5804-5807 (1994)]; Schmidt, EE, et al. Cancer Research 54:6321-6324 (1994). Although this might suggest that greater levels of E2F are expressed in malignant cells, E2F is still expressed in non-malignant cells.

Please replace the first full paragraph on page 7 with the following replacement paragraph:

Vector systems containing a E2F responsive promoter operably linked to a gene of interest can be used to selectively express that gene in significantly higher levels in a malignant cell in contrast to a non-malignant cell. The gene of interest is a gene whose expression is desired in the malignant cell but not the non-malignant cell. Preferably, the gene would encode ~~be-express~~ a cytotoxic or therapeutic protein.

Please replace the paragraph bridging pages 7-8 with the following replacement paragraph:

We have found that similar levels of expression of a suicide gene such as the herpes thymidine kinase (tk) gene are obtained in malignant cells whether the gene is operably linked ~~leaked~~ to a E2F responsive promoter or another promoter such as the cytomegalovirus early promoter (CMV). This observation is based upon cell death based upon subsequent treatment with ganciclovir (GVC). Cells expressing tk are sensitive to GVC and are killed (See Fig. 5A and B). Animals treated with tk and GCV live significantly longer than untreated animals. However, whereas extensive tissue damage was seen in normal tissues injected with tk under the control of a CMV promoter after GVC treatment, no obvious normal tissue toxicity was seen in animals injected with tk operably linked to a E2F responsive promoter, except from that local trauma resulting from the injection, which was indistinguishable from sham injected animals (See Fig. 5C). Figure 4 further shows that the expression of a gene operably linked to an E2F responsive promoter is selective for malignant versus normal tissues. This selectivity is all the more remarkable because E2F is normally expressed in cells in a cycle dependent manner.